

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 01.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-029919**Date Inspected:** 16-Aug-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Jesus Cayabyab & Bernie Docena			CWI Present:	Yes	No	
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No	N/A
				Delayed / Cancelled:	Yes	No	N/A
Bridge No:	34-0006			Component:	See Below		

Summary of Items Observed:

Quality Assurance Inspector (QAI) Edward Leach was at the American Bridge/Flour (ABF) job site at Yerba Buena Island between the times noted above in order to monitor Smith Emery Quality Control (QC) functions and the in process work being performed by ABF personnel. The following items were observed:

Tower Skirt Ring Beam

The QAI periodically observed ABF welding personnel Gao Wu Chin utilizing the Shielded Metal Arc Welding (SMAW) process in the vertical (3G) position with Atom Arc E7018-1 HR4, 1/8" diameter electrode to complete welding for the Complete Joint Penetration (CJP) field splice on the tower skirt ring beam on north CD Corner of the north shaft. At this time the QAI observed the welder was in the process of completing cover passes on side B.

As welding continued the QAI verified welding amperage at approximately 125 amperes. The QAI verified Welding Procedure Specification (WPS) ABF-WPS-D1.5-1020, Rev1 and ABF-WPS-D1.5-1160 for compliance. Later in the shift the QAI witnessed QC Inspector Bernie Docena perform 100% shear wave Ultrasonic Testing (UT) verification for CJP weld splice using a transducer/70 degree plastic wedge combination. Mr. Bernie Docena performed a straight beam examination prior to shear wave. No relevant indications were observed and the weld was accepted by QC.

ESW Weld Repair "V"

The QAI periodically observed ABF welding personnel Mike Jimenez utilizing the Shielded Metal Arc Welding (SMAW) process in the vertical (3G) position with Atom Arc E7018-1 H4R, 5/32" diameter electrode to weld excavation for a weld repair. The welding is taking place on the exterior (west) side at joint V, weld #E-043 #14 on Face B side for a repair designated as 201305-009. Excavation dimensions are noted as Y=5000mm-5450mm,

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Length=450mm, Width=90mm, Depth=78mm. The welder was observed applying cover passes on this date. The QAI observed the interpass temperature was maintained at approximately 390 degrees Fahrenheit with electric heating coil blankets through a heat induction system. As welding continued the QAI periodically verified welding amperage at approximately 140 amperes. Several verifications of this reading were made throughout the day with similar readings. The Welding Procedure Specification (WPS) designated for this repair was identified as ABF-WPS-D1.5-1000Repair, Rev.3. QC Inspector Bernie Docena was monitoring the progress of this repair on this date.

ESW Weld Repair “Q”

The QAI periodically observed ABF welding personnel Donald Plumb utilizing the Shielded Metal Arc Welding (SMAW) process in the vertical (3G) position with Atom Arc E7018-1 H4R, 5/32” diameter electrode to weld excavation for a weld repair. The welding is taking place on the exterior (east) side at joint Q, weld #E-043 #16 on Face A side for a repair designated as 201308-003. Excavation dimensions are noted as Y=3390mm-3760mm, Length=370mm, Width=70mm, Depth=55mm. The welder was observed applying filler passes on this date. The QAI observed the interpass temperature was maintained at approximately 410 degrees Fahrenheit with electric heating coil blankets through a heat induction system. As welding continued the QAI periodically verified welding amperage at approximately 145 amperes. Several verifications of this reading were made throughout the day with similar readings. The Welding Procedure Specification (WPS) designated for this repair was identified as ABF-WPS-D1.5-1000Repair, Rev.3. QC Inspector Bernie Docena was monitoring the progress of this repair on this date.

The welding & workmanship observed on this date appeared to be in general compliance with the contract specifications. The following pictures below detail some of the observations made on this date.



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Summary of Conversations:

General conversations with ABF/JV QC NDT personnel relevant to work and testing performed during this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

Inspected By:	Leach,Ed	Quality Assurance Inspector
Reviewed By:	Mertz,Robert	QA Reviewer
